

### **REMARKS**

This paper is responsive to the Final Office Action dated May 12, 2005. Applicants have canceled claim 11 and amended claims 1, 12, 13, 31 and 40. Claims 1-10 and 12-53 are pending upon entry of this amendment.

### **Information Disclosure Statements**

Applicants reiterate their requests that the Examiner provide initialed PTO-1449 forms for information disclosure statements filed May 7, 2002 and October 15, 2002. The Examiner indicated that the references "have been considered." Applicants appreciate this notification. However, Applicants would appreciate initialed PTO-1449 forms.

### **Claim Rejection Under 35 U.S.C. § 102**

In the Office Action, the Examiner maintained his rejection of claims 1-53 under 35 U.S.C. 102(b) as being anticipated by Cheng (US 6,067,548). Applicants respectfully traverse the rejection. Cheng fails to disclose each and every feature of the claimed invention, as required by 35 U.S.C. 102(b), and provides no teaching that would have suggested the desirability of modification to include such features.

Prior to addressing each claim, Applicants provide the following specific remarks to the recent Office Action. In Applicants' previous response, Applicants pointed out that Cheng describes techniques for modeling organizational resources in the context of an organizational hierarchy and workflow. In the recent Office Action, the Examiner asserted that Cheng describes "more than an organization hierarchy." In the Office Action, the Examiner states that in Cheng, the "resources such as employees, departments, products, machines, projects, and accounts provide for software resources and modeling functionality to enable interacts [sic] between the resource components."

As outlined in the previous Response, the Cheng system does not teach a system capable of classifying reusable software assets that may be incorporated as components within a software development project, e.g., executable software code, software library routines or software source code that may be reused. Applicants have amended certain claims to clarify the meaning of "software resource" as software having a programming interface. Moreover, Applicants have

amended certain claims to clarify that the specific functions and data types of programming interface are used to classify the software asset. In addition, Applicants have amended certain claims to clarify that a software resource is software that is usable by a software developer as a component within a software development project, as further required by claim 1

For example, Applicants' claim 1 requires a software utility that includes a data type mapping means and a functional mapping means for mapping the data types used by software resources, as well as functions performed by those particular software resources, to a domain model. As amended, claim 1 requires that the functions and data types mapped to the domain model are provided by an application programming interface (API) of the software resource being classified. Thus, the term "software resource" is limited to actual software having a programming interface, and claim 1 requires the specific functions and data types of that programming interface be used to classify the software resource.

Nowhere does Cheng teach a data type mapping means capable of mapping data types and functions of a programming interface to a domain model. The term "organizational objects" and "enterprise model" are used throughout Cheng. Cheng provides examples of the term "organizational objects" as employees, departments, products or projects.<sup>1</sup> Cheng provides a specific example of an organizational hierarchy that is developed which includes "employees 70 belonging to a particular department 72 such as engineering, or name engineers 78."<sup>2</sup> Even portions of Cheng cited by the Examiner refer to modeling "organizational objects" for purposes of managing the role of those objects. It is clear that Cheng is primarily related to modeling the departments, employees and the general organizational structure of an enterprise for workflow management. FIG. 3 of Cheng shows an enterprise 58 or corporation composed of a number of organizations 52, and each one of these organizations 52 stores at least one class of members 54 which are organizational objects such as employees, departments, products or projects. FIG. 4 shows how departments in Cheng may be "partitioned" into engineers, marketers and temporary workers. FIG. 5 shows in detail how the Cheng model may be used to define a name, state, job, title raise and other data may be defined for each employee. Thus, as clearly illustrated above, FIGS. 3-5 of Cheng show techniques for modeling the organizational objects, i.e., the employees,

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<sup>1</sup> Col. 6, ll. 48-53.

<sup>2</sup> Col. 7, ll. 26-30.

departments, projects and machines. The Cheng modeling techniques do NOT teach a mapping means that allows actual data types and functions of a programming interface of software resources to be mapped to a domain model.

In the recent Advisory Action, the Examiner points out that the resources modeled by Cheng include “employees, departments, products or projects” and that these may generally be viewed as “data types.” Applicant disagrees that these objects can reasonably be construed as “data types,” at least as the term is used by the present application. Moreover, in view of Applicant’s amendments, it should be clear that Cheng’s techniques for modeling organizational resources (employees, projects, products) do not teach or suggest Applicant’s claimed system for mapping actual data types and functions of a programming interface of a software resource to a domain model for purposes of classification and reuse.

Moreover, Cheng does not describe a search means for searching the database for identifying the software resource as containing software as usable by a software developer as a component within a software development project, as further required by claim 1.

As an additional preliminary comment, the Examiner has failed to perform his obligation of providing a substantive examination of several of Applicants’ claims. For example, as exemplified in detail below, dependent claims 14-17 and 24 include many elements not addressed by the Examiner. Applicant respectfully requests that the Examiner consider all of the elements of Applicants’ dependent claims.

Similarly, independent claim 51 and dependent claims 52-53 require numerous elements that the Examiner has not yet addressed. Applicant respectfully requests that the Examiner consider all of the elements of claims 51-53.

#### ***Claims 1-10***

In view of the above, Applicants specifically address each claim. Cheng fails to teach or suggest such a software utility comprising data type mapping means that allow the user to map data types to the domain model, and function mapping means that allow the user to map software resource functions to the domain model, wherein the functions and data types are provided by an application programming interface (API) of the software resource being classified, as recited by Applicants’ amended claim 1. Further, claim 1 fails to teach or suggest a search means for searching the database for identifying the software resource as containing software usable by a

software developer. As explained above, Cheng system is unrelated to classification of software based on data types and functions (e.g., routines) provided by an API of the software. Moreover, Cheng is unrelated to classification of software that can be used by a developer.

With respect to claim 2, Cheng fails to teach or suggest the data type mapping means and function mapping means wherein the domain model comprises a process model comprising processes and use cases and a structural model comprising reference components, reference interfaces and reference function. Contrary to the Examiner's assertions, column 11 of Cheng does not describe any of these features. Instead, column 11 of Cheng describes a "run-time architecture" for the enterprise modeling system and mechanisms for extracting employee data from enterprise databases, such as an HR database.

With respect to claims 8, 9 and 10 the Examiner's comments do not make sense to the Applicants. Claim 8 requires the data type mapping means or the function mapping means comprise means for the user to provide comments, the comments being stored in the database. Claim 9 requires that the comments are associated with a particular data type or resource function and include information relating to quality of mapping. Claim 10 requires that the comments are associated with a particular data type or resource function and include information relating to the purposes or usage of individual functions or data types. Thus, these elements of Applicants' claims provide specific structural means that allows a user provide comments for association with the data types or functions related to a software asset. In rejecting these claims, the Examiner states "applicants [sic] system is not considered to provide comments." This is irrelevant. Consequently, the Examiner has failed to perform his obligation of providing a substantive examination of claims 8, 9 and 10. Moreover, Cheng fails to teach or suggest means that allows a user to input comments related to the quality of mapping for a software data type or a function. These are specific structural features of Applicants' claims and must be examined. The rejection of claims 8, 9 and 10 is erroneous, and should be immediately withdrawn.

For at least these reasons, Cheng fails to disclose each and every limitation set forth in claims 1-10. For at least these reasons, the Examiner has failed to establish a prima facie case for anticipation of Applicant's claims under 35 U.S.C. 102(b). Withdrawal of this rejection is requested.

***Claims 12-30***

With respect to claim 12, Cheng fails to describe a software utility for managing software resources within an enterprise, comprising a database comprising software resource information including location information and functionality information, the functionality information including functions provided by programming interfaces of the software resources being mapped to a domain model. Further, for at least those reasons set forth above, Cheng does not teach a system having a search engine for searching the database to locate software resources usable by a software developer for a software development project.

Additionally, the Examiner has failed to perform his obligation of providing a substantive examination of claim 14. Claim 14 requires a scoring engine that ranks software resources according to how closely they match the functional or nonfunctional requirements. Thus, claim 14 requires a novel scoring engine that ranks software resource based on either function requirements of that software resource or non-functional software requirements. In rejecting this claim, the Examiner merely refers to claim 9 where he stated that databases inherently provide search means. Applicants request the Examiner perform his obligation of examining on the merits the requirements of claim 14. Again, claim 14 requires a scoring engine that ranks software resources according to how closely they match functional or nonfunctional requirements. These features are not inherent in a conventional database.

With respect to claim 15, the Examiner cites an irrelevant portion of Cheng. Applicants' claim 15 requires means for creating a persistent search specification that can be shared between multiple users. In rejecting claim 15, the Examiner cites col. 17, ll. 54-67. However, Cheng makes no mention of a persistent search. This portion only states that a membership network may expand to have new contacts. The Examiner's rejection of claim 15 is clearly erroneous and must be withdrawn.

With respect to claim 16, the Examiner again cites an irrelevant portion of Cheng. Applicants' claim 16 requires that software resources located by the search engine may be selectively attached to the persistent search specification. Thus, claim 16 is directed to a novel technique by which a persistent search specification for software resources can be created. In rejecting claim 15, the Examiner cites col. 17, ll. 54-67. As explained above, Cheng makes no

mention of a persistent search and this portion of Cheng only states that a membership network may expand to have new contacts. The Examiner's rejection of claim 16 is clearly erroneous and must be withdrawn.

With respect to claim 17, it appears that the Examiner failed to consider any of the recited elements. Claim 17 requires a software utility where portions of the persistent search specification not met by attached assets may be published as requirements for development of additional software resources. As noted above, Cheng fails to describe any form of a persistent search. With respect to claim 17, Cheng fails to describe a software utility where portions of a persistent search can be published. Further, Cheng fails to describe a software utility where portions of a persistent search can be published for development of additional software. The portion of Cheng cited by the Examiner merely summarizes the organizational modeling techniques already addressed by the Applicant. This has nothing at all to do with persistent searches, let alone a software utility where portions of a persistent search can be published for development of additional software. Similarly, the Examiner's rejection of claim 18 is erroneous in that the rejection is based on the same irrelevant portion of Cheng.

With respect to claim 19, the Examiner refers to "Cheng's claims 6-7." Applicants' claim 19 requires means for publishing the persistent search specification as requirements for development of additional software resources. In other words, means is required for publishing the search specification itself and that publication is for the purpose of development of additional software resources. Cheng's claims 6-7 describe use of active and inactive states to indicate whether an object (e.g., department or employee) is available. This does not teach or suggest publication of portions of a persistent search specification that can be shared between multiple people.

Applicants' claim 20 requires means for notifying at least one of the multiple users when software resources matching the persistent search specification are added to the database. As noted above, Cheng fails to describe a persistent search and, as such, fails to provide a means for notifying users when software resources matching a persistent search are added to the database. The "dynamic" portion of col. 19 cited by the Examiner refers to dynamically modeling the changing roles of objects (employees) within an enterprise. This does not anticipate means for

notifying at least one of the multiple users when software resources matching the persistent search specification are added to the database. Cheng is not referring to a persistent search. Cheng does not describe notification when a new software resource matches a persistent search.

Applicants' claim 24 requires a graphical user interface comprising means for navigating between the process model and the structural model. In rejecting claim 24, the Examiner merely refers to the rejection of claim 1. However, nowhere with respect to claim 1 did the Examiner address a graphical user interface means for navigating between the process model and the structural model. Thus, the Examiner has failed to establish a prima facie case of anticipation of claim 24. Moreover, Applicants point out that, contrary to the Examiner's assertion, FIGS. 8 and 9 of Cheng do not depict a user interface at all (FIG. 8 depicts an architecture and FIG. 9 depicts a graph). FIG. 10 is the only illustration of a user interface in Cheng and it merely shows entry of data relating to an employee.

In rejecting claim 26-28, the Examiner refers to Cheng's claims 15-16. Applicants' claim 26 requires a usage record for the software resource. However, Cheng's claims, as cited by the Examiner, appear to merely describe a life-cycle availability of an object and not actual usage record for a software resource. Applicants' claim 28 requires that the usage record comprise one or more items selected from the group consisting of payment records, license keys, request histories, and usage histories. None of these elements are taught or suggested by Cheng. Again, the Examiner has failed to consider the elements of Applicants' claim.

For at least these reasons, Cheng fails to disclose each and every limitation set forth in claims 12-30. For at least these reasons, the Examiner has failed to establish a prima facie case for anticipation of Applicants' claims under 35 U.S.C. 102(b). Withdrawal of this rejection is requested.

### ***Claims 31-50***

Claims 31-50 are patentable for reasons similar to those set forth above. For example, with respect to amended 31, Cheng fails to teach or suggest a method of classifying a software resource comprising functions and data types, the method comprising providing a domain model comprising model functions and mode data types, mapping resource data types to model data types to produce data type maps, mapping resource functions to model functions to produce

function maps, and storing the data type maps and function maps in a searchable database, wherein the functions and data types are provided by a programming interface of the software resource, and wherein the software resource contains software usable within a software development project.

With respect to amended claim 40, Cheng fails to teach or suggest a method of managing software resources within an enterprise, comprising maintaining a searchable database of software resource information including location information and functionality information, the functionality information including functions provided by programming interfaces of the software resources that are being mapped to a domain model. Moreover, Cheng fails to teach or suggest searching the database to locate any of the software resources for a software development project based on the data types and functions of the programming interface.

For at least these reasons, Cheng fails to disclose each and every limitation set forth in claims 31-50. For at least these reasons, the Examiner has failed to establish a prima facie case for anticipation of Applicant's claims under 35 U.S.C. 102(b). Withdrawal of this rejection is requested.

### ***Claims 51-53***

As noted above, independent claim 51 and dependent claims 52-53 require numerous elements that the Examiner has not even addressed. In rejecting claims 51-53, the Examiner merely referred to his comments on claims 1-11. However, claims 51-53 require numerous elements not present in claims 1-11. For example, the Examiner has failed to address the requirement of determining an order for mapping resource functions and resource data types, wherein more complex functions and data types are mapped later than simpler functions and data types. Further, the Examiner has failed to address the requirement of presenting the resource functions and data types in the determined order to a user for mapping. Moreover, the Examiner has failed to address presenting suggested mappings for each function and data type to the user for determination of a mapping, wherein determined mappings for earlier resource functions or data types are used to suggest mappings for later types. Cheng makes no mention of determining an order for mapping based on complexity. Chang makes no mention of presenting suggested mappings at all.



For at least these reasons, Cheng fails to disclose each and every limitation set forth in claims 51-53. For at least these reasons, the Examiner has failed to establish a prima facie case for anticipation of Applicant's claims under 35 U.S.C. 102(b). Withdrawal of this rejection is requested.

### CONCLUSION

All claims in this application are in condition for allowance. Applicants respectfully request reconsideration and prompt allowance of all pending claims. Please charge any additional fees or credit any overpayment to deposit account number 50-1778. The Examiner is invited to telephone the below-signed attorney to discuss this application.

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